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| HAYNES AND BOONE, LLP 901 MAIN STREET, SUITE 3100 DALLAS, TX 75202 | | | MURPHY, RHONDA L | |
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DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,681

Applicant(s)

BAKER ET AL.

Examiner

Rhonda Murphy

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) 69-74 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-68 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-68, drawn to a system for providing wireless data services, classified in class 370, subclass 338.

II. Claim 69-74, drawn to a method for configuring a wireless access integrated node as a network node, classified in class 370, subclass 255.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions I (claims 1-68) is directed to the architecture of a system for providing wireless data services; while invention II (claims 69-74) to a method for configuring a wireless access integrated node by initializing, searching, detecting and decoding techniques and further, group I does not require the subject matter of claim 69 to be patentable.

3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with David O'Dell on October 20, 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-68. Affirmation of this election must be made by applicant in replying to this

Office action. Claims 69-74 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character **"16"** has been used to designate both **"BSC"** and **"Mobile Switch"** in Figure 1a. The Mobile Switch shall be designated as **"18"**. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to because the Database in Figure 5 shall be designated as **"20"**, according to page 14, line 17 of the specification; and reference

character "10" is missing for the MS's in Figure 6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 5-15 and 43-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims fail to indicate which, of the

plurality of mobile data transmission modules, signaling modules, interfaces or ports it is referencing. Claim language such as, "one of the plurality" should be used.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10,12-14,16,20,23-25,27-48,50-52,54,57-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lager et al. (US 6,636,502) in view of Pines et al. (US 2003/0007625).

Regarding claims 1 and 39, Lager teaches a system for providing wireless data services comprising: a) a plurality of mobile stations (Fig. 8, **GPRS-MS**); b) at least one packet data network (Fig. 8, **PDN1** and **PDN2**); c) a wireless access integrated node intermeduating between the plurality of mobile stations and at least one packet data network (Fig. 8, **PLMN-SW**), the wireless access integrated node having: i) a plurality of mobile data transmission modules and signaling modules for sending, processing, and receiving data packets (Fig. 8, modules **SCM**, **SEL**, **MSC/VLR**, **NIP-RC** and transceiver (not shown) connected to the antenna of PLMN-SW, for communication with the GPRS-MS); ii) a plurality of interfaces and ports for sending messages to and receiving messages from at least one packet data network, systems, and mobile stations interconnected with the wireless access integrated node (col. 11, lines 17-24, 51-59);

iii) a database containing subscription information for the plurality of mobile stations attached to the wireless access integrated node (Fig. 8, **HLR/SP**; col. 12, lines 66-67, col. 13, lines 1-3); iv) a main controller to coordinate and control the mobile data transmission modules, signaling modules, interfaces, and database (Fig. 8, **AC**; col. 12, lines 57-65). d) a radio interface interconnecting the plurality of mobile stations and the wireless access integrated node (represented by "**Sending NIP**" signal in Fig. 8); and e) a network interface interconnecting the wireless access integrated node and at least one packet data network (represented by **P1** and **P2** lines in Fig. 8; col. 11, lines 51-59).

Lager fails to teach a database containing charging information for the plurality of mobile stations attached to the wireless access integrated node.

However, it is known in the art that charging information is stored in a database for billing subscribers. It would have been obvious to one having ordinary skill in the art at the time the invention was made, to include a database containing charging data in order to record subscriber use/access to the network.

Lager also fails to teach a main controller for collecting charging data.

However, Pines teaches a main controller (Fig. 1, **service provider 26**) for collect charging data (page 16, paragraph 0200).

In view of this, having the system of Lager and then given the teachings of Pines, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to modify the system of Lager, by collecting charging data within the main controller, in order to maintain subscriber records within a centralized location.

Regarding claims 2 and 40, Lager further teaches a system wherein the packet data network is an Internet (the enclosed circle of Fig. 8).

Regarding claims 3 and 41, Lager further teaches a system wherein the packet data network is an intranet (Fig. 8, **PDN2**).

Regarding claims 4 and 42, Lager further teaches a system wherein a content server is attached to the intranet (Fig. 8, **Radius server**).

Regarding claims 5 and 43, Lager further teaches a system wherein the mobile data transmission module is a PDCP module (col. 8, lines 6-8).

Regarding claims 6 and 44, Lager further teaches a system wherein the mobile data transmission module is a RLC/MAC module (col. 5, lines 28-39; note col.10, lines 66-67, col. 11, lines 1-5).

Regarding claims 7 and 45, Lager further teaches a system wherein the mobile data transmission module is a TRX module (Fig. 8, transceiver (not shown) connected to the antenna of PLMN-SW, for communication with the GPRS-MS).

Regarding claims 8 and 46, Lager further teaches a system wherein the signaling module is Radio Resource Management (module (not shown) located within SGSN of Fig. 8, col. 8, lines 6-30).

Regarding claims 9 and 47, Lager further teaches a system wherein the signaling module is GPRS Mobility Management (SCM of Fig. 8, col. 14, lines 64-67, col. 15, lines 1-10; wherein the SCM provides security by permitting or denying access to the packet data network).

Regarding claims 10 and 48, Lager further teaches a system wherein the signaling module is Session Management (NIP-RC of Fig. 8, col. 12, lines 49-54).

Regarding claims 12 and 50, Lager further teaches a local information system interface (Fig. 8, **IP-TUN** line).

Regarding claims 13 and 51, Lager further teaches an appliance control interface (Fig. 8, **P1** line).

Regarding claims 14 and 52, Lager further teaches a system wherein the interface is an intranet gateway (an intranet gateway interface is inherent in the system depicted in Fig. 8, since an interface is required for the exchange of data between the access node of **PLMN-SW** and the intranet of **PDN2**).

Regarding claims 16 and 54, Lager teaches a local information system interconnected with the wireless access integrated node (Fig. 8, **ISP2**).

Regarding claims 20 and 57, Lager teaches a local appliance control system interconnected with the wireless access integrated node (Fig. 8, **PDN2**).

Regarding claims 23 and 58, Lager teaches a wireless data collector interconnected with the wireless access integrated node (Fig. 8, **GPRS-MS**; col. 15, lines 10-15).

Regarding claims 24 and 59, Lager teaches a system wherein the radio interface is a GPRS radio interface (GPRS-MS transmits over radio interface represented by "Sending NIP" signal in Fig. 8):

Regarding claims 25 and 60, Lager teaches a system wherein the network interface is an IP interface (Fig. 8, **IP-TUN** line connected to **ISP2**).

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Regarding claims 27 and 61, Lager teaches mobile transmission modules including means for modulating data packets (it is well known in the art that data packets are modulated for transmission over a communication network).

Regarding claims 28 and 62, Lager teaches mobile transmission modules including means for compressing data packets (col. 3, lines 64-67, col. 4, lines 1-2).

Regarding claims 29 and 63, Lager teaches mobile transmission modules including means for encrypting data packets (col. 3, lines 41-45).

Regarding claims 30 and 64, Lager teaches mobile transmission modules including means for multiplexing data packets (multiplexing data packets are known in the art for transmitting signals over a single channel; TDMA is supported by GPRS, thus multiplexing is inherent).

Regarding claims 31 and 65, Lager teaches mobile transmission modules including means for correcting errors in data packets (error correction in data packets are well known in the art for proper data reception).

Regarding claims 32 and 66, Lager teaches mobile transmission modules including means for segmenting data packets (it is known in the art that data packets are segmented - encapsulated and decapsulated for transmission among different network protocols; col. 5, lines 32-39).

Regarding claims 33 and 67, Lager teaches mobile transmission modules including means for controlling the sequence of data packets (controlling the sequence of data packets is well known in the art, and occurs within the access control unit, **AC**, in Fig. 8).

Regarding claim 34, Lager teaches a wireless access integrated node including means for supporting mobile stations roaming between a local wireless access integrated node environment and a public mobile network (Fig. 4, col. 5, lines 56-67).

Regarding claims 35 and 37, Lager teaches a wireless access integrated node including means for supporting mobile stations roaming between different wireless access integrated node systems (col. 5, lines 56-67).

Regarding claim 36, Lager teaches a wireless access integrated node includes means for providing wireless data services in a community service area located within cells of a public network (Fig. 8, public networks **ISP's**) when the wireless access integrated node is clustered with several other wireless access integrated node systems (Fig. 3, PLMN A and PLMN B).

Regarding claims 38 and 68, Lager teaches a wireless access integrated node including means for configuring the wireless access integrated node as a network node (Fig. 8, col. 11, lines 6-16).

3. Claims 11,15,49 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lager in view of Gaffney (US 6,333,919).

Regarding claims 11 and 49, Lager teaches a system with interfaces.

Lager fails to explicitly teach a voice interface.

However, Gaffney teaches a system with voice interfaces (Fig. 1, **interface 110** and **120**).

In view of this, having the system of Lager and then given the teachings of Gaffney, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to modify the system of Lager, by including a voice interface, in order to provide a link for the exchange of voice data between devices.

Regarding claims 15 and 53, Lager teaches a system having ports.

Lager fails to explicitly teach an RJ11 port for a fixed wired telephone connection.

However, Gaffney teaches a fixed wire telephone connection (Fig. 1, desk phone **450**; col. 4, lines 55-56) and it is known in the art that desk phones commonly use an RJ11 jack.

In view of this, having the system of Lager and then given the teachings of Gaffney, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to modify the system of Lager, by including an RJ11 port, in order to provide a connection for telephone use.

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lager in view of Doviak et al. (US 6,418,324).

Regarding claim 17, Lager teaches a wireless access integrated node with a local information system.

Lager fails to teach means for remotely synchronizing a personal digital assistant with its host program.

However, Doviak teaches means for remotely synchronizing a personal digital assistant (Fig. 1, **PDA 52**) with its host program (**MDC 54**; col. 9, lines 4-20).

In view of this, having the system of Lager and then given the teachings of Doviak, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to modify the system of Lager, by remotely synchronizing a personal digital assistant with it's host, in order to provide a user with a wider coverage area and more efficient service.

5. Claims 18-19, 21-22 and 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lager in view of Swartz (US 2003/0053444).

Regarding claims 18 and 55, Lager teaches a wireless access integrated node and commands from the mobile station to the local information system.

Lager fails to teach voice recognition means for audibly relaying service request commands.

However, Swartz teaches voice recognition means for audibly relaying service request commands (page 7, paragraph 72).

In view of this, having the system of Lager and then given the teachings of Swartz, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to modify the system of Lager, by including voice recognition means, in order to allow the user to verbally request information from the local information system.

Regarding claims 19 and 56, Lager teaches a wireless access integrated node relaying information from the local information system to the mobile station.

Lager fails to teach text-to-speech means for audibly relaying information.

However, Swartz teaches text-to-speech means for audibly relaying information (page 7, paragraph 74).

In view of this, having the system of Lager and then given the teachings of Swartz, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to modify the system of Lager, by including text-to-speech means, in order to allow the user to receive audio data which was originally in text form.

Regarding claim 21, Lager teaches a wireless access integrated node and commands from the mobile station to the appliance control system.

Lager fails to teach voice recognition means for audibly relaying service request commands.

However, Swartz teaches voice recognition means for audibly relaying service request commands (page 7, paragraph 72).

In view of this, having the system of Lager and then given the teachings of Swartz, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to modify the system of Lager, by including voice recognition means, in order to allow the user to verbally request information from the appliance control system.

Regarding claim 22, Lager teaches a wireless access integrated node relaying an appliance status report delivered from the appliance control system to the mobile station.

Lager fails to teach text-to-speech means for audibly relaying the report.

However, Swartz teaches text-to-speech means for audibly relaying information (page 7, paragraph 74).

In view of this, having the system of Lager and then given the teachings of Swartz, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to modify the system of Lager, by including text-to-speech means, in order to allow the user to receive audio data which was originally in text form.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lager in view of McNiff et al (US 2003/0076808).

Regarding claim 26, Lager teaches a system including means for enabling a mobile station user to obtain a temporary subscription to the wireless access integrated node through a dynamic registration (col. 12, lines 66-67, col. 13, lines 1-12).

Lager fails to teach a temporary subscription and cancellation process in which the user's mobile station's subscription identity is linked with the mobile equipment identity.

However, McNiff teaches a temporary subscription and cancellation process (page 3, paragraph 36) in which the user's mobile station's secret subscription identity (page 3, paragraph 29) is linked with the user's mobile station's mobile equipment identity (page 3, paragraph 28).

In view of this, having the system of Lager and then given the teachings of McNiff, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to modify the system of Lager, by including a temporary

subscription and cancellation process, in order to restrict access to registered users and maintain a secure network.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are cited: System and Method for Placing Wireless Calls on an Internet Protocol Based Local Area Network Based Upon Quality of Service Conditions, Alperovich et al. US 6,728,215; Method and Mobile Radio Telephone Network For Handling a Packet Data Service, Kreppel US 6,415,151; Method and Apparatus for Integrated Wireless Communications in Private and Public Network Environments, Sayers et al. US 6,687,243.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda Murphy whose telephone number is (571) 272-3185. The examiner can normally be reached on Monday - Friday 8:00 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

rlm



RICKY NGO
PRIMARY EXAMINER